CLAIMS

I Claim:

1. A gutter screen for a rain gutter having an upper opening, said guard comprising:

A fine mesh screen having front and rear opposing longitudinal edges and having a top surface and a bottom surface comprised of threads with openings between threads no greater than 80 microns, said fine mesh screen having a size and configuration to cover the opening into a rain gutter, said fine mesh screen being substantially flexible so that said fine mesh screen may be configured in roll form for the purpose of decoiling into a roll form shaping machine;

an underlying skeletal structure of expanded metal having front and rear opposing longitudinal edges with a top surface and a bottom surface having diamond shaped water receiving openings, said skeletal structure positioned below and directly connected throughout the extent of the gutter screen, said expanded metal being substantially flexible so that said expanded metal may be configured in roll form for the purpose of decoiling into a roll form shaping machine allowing for crimp attachment to and shaping with said fine mesh screen;

a forward connector portion crimped to said front longitudinal edges of said fine mesh screen and said skeletal structure of expanded metal and a rear connector portion associated with and crimped to said rear longitudinal edges of said fine mesh screen and said skeletal structure of expanded metal for installing the gutter screen to a rain gutter.

2. The gutter screen according to claim 1, wherein said fine mesh screen and said

expanded metal are made integral to each other by crimping along front and rear longitudinal edges.

3. The gutter screen according to claim 1, wherein said fine mesh screen and said expanded metal have a plurality of downward extending channels spaced a minimum of one inch apart and parallel to said front and rear longitudinal channels of said fine mesh screen and said expanded metal.

4. The gutter screen according to claim 1, wherein said fine mesh screen and said expanded metal have a plurality of said downward extending channels formed to a depth equal to or greater than 3/8 inch whereby the pull of gravity on the volume of water present on said downward extending channel is greater than water adhesion properties and forward flow velocity of roof runoff whereby the pull of gravity on said volume of water is able to break the forward flow of roof runoff and force said runoff downward into a gutter.

5. The gutter screen according to claim 1 wherein said downward extending channels are crimped so that opposing walls of said downward extending channels contact the other so that said fine mesh screen is further secured to said expanded metal.

6. The gutter screen according to claim 1 wherein said downward extending channels are crimped so that opposing walls of said downward extending channels contact the other so that a more solid downward flow path for water is created whereby forward water flow through a porous inexpensive medium is diminished.

7. The gutter screen according to claim 1 wherein said fine mesh screen contacts the topmost surface of said angled metal walls such point of contact forming angles greater than or less than 90 degrees between the bottom surface of said fine mesh screen and the top surface of said angled metal walls of said expanded metal.

8. The gutter screen according to claim 1 wherein said diamond shaped water receiving openings are formed by metal walls extending downward and angled approximately 30-40 degrees whereby multi angled redirection of forward water flow downward into a gutter is realized aiding siphoning and self-cleaning properties of said gutter screen.

9. The gutter screen according to claim 1 wherein the width of said diamond openings are equal to or greater than 3/8 inch whereby water bridging paths across said water receiving opening and resulting forward flow of water is diminished.

10. The gutter screen according to claim 1 wherein said expanded metal is positioned so that said angled metal walls of said diamond shaped openings are angled downward and rearward from the forward longitudinal edge of said gutter screen whereby forward flow of water is further limited and redirected downward.